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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,322	09/30/2003	Christopher van Es	5231-094-US01	2243
68009 7590 06/25/2010 Hanify & King, P.C. 1055 Thomas Jefferson Street, NW Suite 400 WASHINGTON, DC 20007				
EXAMINER				
YUAN, KATHLEEN S				
ART UNIT		PAPER NUMBER		
2624				
MAIL DATE		DELIVERY MODE		
06/25/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/673,322

Applicant(s)

ES, CHRISTOPHER VAN

Examiner

KATHLEEN S. YUAN

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 5-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/226)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

The response received on 6/16/2010 has been placed in the file and was considered by the examiner. An action on the merit follows.

Response to Amendment

1. The amendments filed on 4/16/2010 have been fully considered. Response to these amendments is provided below.

Summary of Amendment/ Arguments and Examiner's Response:

2. The applicant has amended claim 1 to include a processor in the method claim. The applicant has also provided arguments which were provided and addressed in the advisory action on 4/23/2010. The response is repeated herein.

3. *On pages 5-6 of the remarks, the applicant directs the examiner to page 2, lines 4-9, which states that it is determined whether the parts are placed on a sensor in a sequence, then to page 6, lines 6-8, which describes that parts can be placed on the sensors within a predetermined period of time.*

4. As stated in the advisory action, the description provided by the applicant does not disclose or specify what the predetermined time period is within. The applicant only points out that the specification states that the parts are placed in a sequence, and on the sensors within a predetermined period of time. These parts of the specification do not specify step e of claim 1, wherein it is determined whether the parts were placed in a sequence when it is determined that data sets match the authentic versions, and when the parts are placed within the predetermined period of time of one another.

Furthermore, the cited parts of the specification do not specify that the predetermined period of time is of the obtaining of the data sets of one another. Therefore, the 112^{1st} paragraph rejection remains.

5. *On page 6, the applicant argues that the 112(2) rejection has been fixed.*
6. The 112(2) rejection remains because the applicant did not amend the part of the claim that was rejected.
7. *On page 6, the applicant argues that argues Abrahams fails to teach determining whether the fingerprints are required within a predetermined time of one another, and that Abrahams discloses a time-out loop that requires a fingerprint to be input within a predetermined time of when the fingerprint is requested, not within a predetermined period of time of one another.*
8. First of all, Abrahams predetermined time period is of one another (of the finger inputs) because the predetermined time period is between the entry of the fingerprints. Secondly, the predetermined time period can be interpreted as the time out period plus the time that the server requests the user to provide a fingerprint (fig. 5, step 354, plus time out period between 354 and 356, as disclosed in col. 6, lines 4-14), which is the time between the input of fingerprints, as the applicant describes in the arguments. Therefore, the claimed limitations are met by the prior art.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Drawings

9. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the method steps must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 1, 2, 5-17 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention. The examiner cannot find support in the specification for claim 1 that it is determined whether the parts were placed on the sensor in a sequence when it is determined that the sets match and when the plurality of parts are placed within the predetermined period of time of one another. The examiner cannot find in the specification also for claim 14 that it is determined whether the sequence of data sets are in a specified order when it is determined that the data sets match and that the determining whether the sets are in a specified order also occurs when the data sets are obtained within the predetermined period of time. If the applicant can point out a place in the specification where this is supported, then the rejection will be withdrawn.

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claims 1, 2, 5, 6, 14- 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

14. Claim 1 recites that a method comprises a processor, which is unclear because methods are comprised of steps, not objects (i.e. comprising: operating a processor to perform the following steps...). This would overcome the 112 2nd paragraph rejection and successfully maintain a statutory claim.

15. Claim 14 recites the limitation "the method" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

17. Claims 1, 2, 6, 7, 11, 14 and 15 are rejected under 35 U.S.C. 102(e) as being unpatentable by U.S. Patent 6944773 (Abrahams).

18. Regarding claim 7, Abrahams discloses an apparatus for authenticating a user (fig. 1), the apparatus comprising a fingerprint sensor operable to sensing only one fingerprint at a time (fig. 1, items 122, 126, 130), and a processor (fig. 1, item 104, 108, 110, 112) and a database (fig. 1, item 106) adapted to perform a the method comprising: a. placing each of a plurality of parts of the user's body, fingers when a computer requests the fingerprints in the loop shown in fig. 5 (fig. 5, step 354, request, 356, reads FP, 352, orders another FP to be read) on a biometric contact sensor at a sensing position (col. 3, lines 30-35); b. obtaining from the sensor the entered fingerprint images, the parts of the image being the biometric contact characteristics, and the full image being the data set, for each of the plurality of body parts (fig. 5, step 356); c. comparing each data set with authentic versions, corresponding fingerprints on file, (fig. 5, step 362) stored in a database (fig. 1 item 106); d. determining whether each of the plurality of parts of the user's body are placed on the biometric contact sensor at a

sensing position within a predetermined period of time of one another, by finding if each successive fingerprint is placed within the time-out period (col. 6, lines 4-14); e. determining whether the plurality of parts of the user's body were placed on the biometric contact sensor at the sensing position in a sequence when it is determined that the data sets satisfactorily match the corresponding authentic versions and the plurality of parts of the user's body are placed on the biometric sensor within the predetermined period of time of one another, since when it is determined that the data sets match (fig. 5, step 363 and 364) it is automatically determined that the parts were placed in a sequence because the parts must be placed in sequence in order to be compared (fig. 5, step 352), and when the plurality of parts of the user's body are placed within the predetermined period of time of one another (col. 6, lines 4-14), it is also determined that the parts were placed in a sequence because if the parts weren't, then it is determined that they are not placed in a full sequence by timing out (col. 6, lines 4-14), and if the were, the parts are determined to be entered in the sequence by continuing to the comparison of fig. 5, step 362. Abrahams further discloses the sequence randomly changes after each authentication of the identity of the user, since the fingerprint is chosen by random at each authentication (fig. 5, step 354); and f. issuing an authentication signal when it is determined that the plurality of parts of the user's body are placed on the biometric contact sensor at the sensing position in the sequence (fig. 5, step 366).

19. Claim 1 is rejected for the same reasons as claim 7. Thus, the arguments analogous to that presented above for claim 7 are equally applicable to claim 1. Claim

1 distinguishes from claim 7 only in that claim 1 is a methods claim and claim 7 is an apparatus. An apparatus carries out a method, therefore, prior art applies.

20. Regarding claim 2, Abrahams discloses the body parts are the user's fingertips, since fingerprints are obtained from fingertips (fig. 5, step 354) and the biometric contact sensor is a fingerprint sensor (col. 3, lines 30-35).

21. Regarding claim 6, Abrahams discloses that the data sets are compared with the authentic versions using a correlation based algorithm since the fingerprints are correlated in the algorithm carried out in fig. 4, step 362.

22. Regarding claim 11, Abrahams discloses the apparatus further comprises a data input device (fig. 1, keyboards or any other input device shown in fig. 1).

23. Regarding claim 14, Abrahams discloses a method (fig. 5) of authenticating the identity of a user, the method comprising: a. obtaining a sequence of data sets/ images of biometric characteristics/ fingerprints of the user, the sequence provided in the process loop of fig. 5, steps 352-360 each data set relating to one of a plurality of parts of the user's body, a finger (fig. 5, step 354); b. comparing each data set with authentic versions stored in a database (fig. 5, step 362); c. monitoring the order in which the sequence of data sets was obtained by monitoring the amount of inputs and monitoring the user's input of the fingerprint (fig. 5, step 352 and 354); d. determining whether the data sets are obtained within a predetermined period of time of one another by determining that each data set input is obtained within a time-out period (col. 6, lines 5-10); e. determining whether the sequence of data sets are in a specified order when it is determined that the data sets satisfactorily match the corresponding authentic versions

by finding if the fingerprints match, and thus the correct fingerprint was input in the order specified (fig. 5, step 362) and the data sets are obtained within the predetermined period of time of one another by determining that the inputs have been entered before time-out and thus the specified order has been input by the user (col. 6, lines 5-10), wherein the specified order changes after each authentication of the identity of the user since the fingerprints are chosen at random each time the authentication occurs (fig. 5, step 354); and f. issuing an authentication signal when it is determined that the sequence of the data sets are in the specified order (fig. 5, step 355, 364).

24. Regarding claim 15, Abrahams discloses at least one of the plurality of parts of the user's body is a fingertip, since fingerprints come from fingertips (fig. 5, step 354).

Claim Rejections - 35 USC § 103

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

26. Claims 5, 8, 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abrahams in view of U.S. Patent No 6393139 (Lin et al).

27. Regarding claim 5, Abrahams discloses all of the claimed elements as set forth above and incorporated herein by reference. Abrahams does not disclose expressly that the data sets are compared with the authentic versions using a minutiae based algorithm.

Lin et al discloses data sets are compared with the authentic versions using a minutiae based algorithm (col. 6, line 23).

Abrahams and Lin et al are combinable because they are from the same field of endeavor, i.e. fingerprint authentication.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a minutiae based algorithm.

The suggestion/motivation for doing so would have been to provide a simple, well known and easy way to match fingerprints, and thus create a more robust method.

Therefore, it would have been obvious to combine the method of Abrahams with the minutia matching of Lin et al to obtain the invention as specified in claim 5.

28. Regarding claim 8, Lin et al discloses that many fingerprint sensors are capacitive sensors (col. 1, lines 35-43).

29. Regarding claim 9, Lin et al discloses that many fingerprint sensors are optical sensors (col. 1, line 19).

30. Regarding claim 17, Lin et al discloses in a multiple input device, at least one of the plurality of parts of the user's body is the user's face (col. 5, lines 28-31).

31. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abrahams, as applied to claim 7 above, and further in view of U.S. Patent No. 5864296 (Upton).

Abrahams discloses all of the claimed elements as set forth above and incorporated herein by reference.

Abrahams does not disclose expressly the fingerprint sensor is a thermal sensor.

Upton discloses that many fingerprint sensors are thermal (col. 1, lines 35-36).

Abrahams and Upton are combinable because they are from the same field of endeavor, i.e. fingerprint recognition.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a thermal sensor.

The suggestion/motivation for doing so would have been to provide a more flexible system by providing a different ways of sensing the fingerprint, such as imaging fingerprints in the dark.

Therefore, it would have been obvious to combine the apparatus of Abrahams with the thermal sensor of Upton to obtain the invention as specified in claim 10.

32. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abrahams, as applied to claim 11 above, and further in view of U.S. Patent No. 5594806 (Colbert).

Regarding claim 12, Abrahams discloses all of the claimed elements as set forth above and incorporated herein by reference.

Abrahams does not disclose expressly the data input device is a keypad.

Colbert discloses a data input device is a keypad (col. 6, line 58).

Abrahams and Colbert are combinable because they are from the same field of endeavor, i.e. verification systems.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to provide an input keypad.

The suggestion/motivation for doing so would have been to provide a more accurate/user-friendly system by allowing the user to access data and indicated information by providing a simple means to indicate the user's preferences.

Therefore, it would have been obvious to combine the apparatus of Abrahams with the keypad of Colbert to obtain the invention as specified in claim 12.

33. Claims 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abrahams in view of U.S. Patent Application Publication No. 20030026462 (Chung et al).

Regarding claim 13, Abrahams discloses all of the claimed elements as set forth above and incorporated herein by reference.

Abrahams does not disclose expressly that one a data input device is a smart card reader.

Regarding claim 13, Chung et al discloses that the data input device is a smart card reader (page 7, paragraph 70).

Abrahams and Chung et al are combinable because they are from the same field of endeavor, i.e. authentication.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have a smart card reader.

The suggestion/motivation for doing so would have been to provide a more flexible, robust apparatus by allowing several different functionalities/ inputs of the

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apparatus, and to allow a faster system by storing information on a smart card instead of the system.

Therefore, it would have been obvious to combine the apparatus of Abrahams with the smart card reader of Chung et al to obtain the invention as specified in claim 13.

34. Regarding claim 16, Chung et al discloses that one of the parts of the body that can be used as a biometric characteristic in a multiple input arrangement is the retina (page 3, paragraph 33.)